

H00498.70203.US
Nanoscale Coherent Optical Components
By: Charles M. Lieber et al.
Express Mail Label No.: EV 292560137 US
Date of Deposit: July 21, 2003

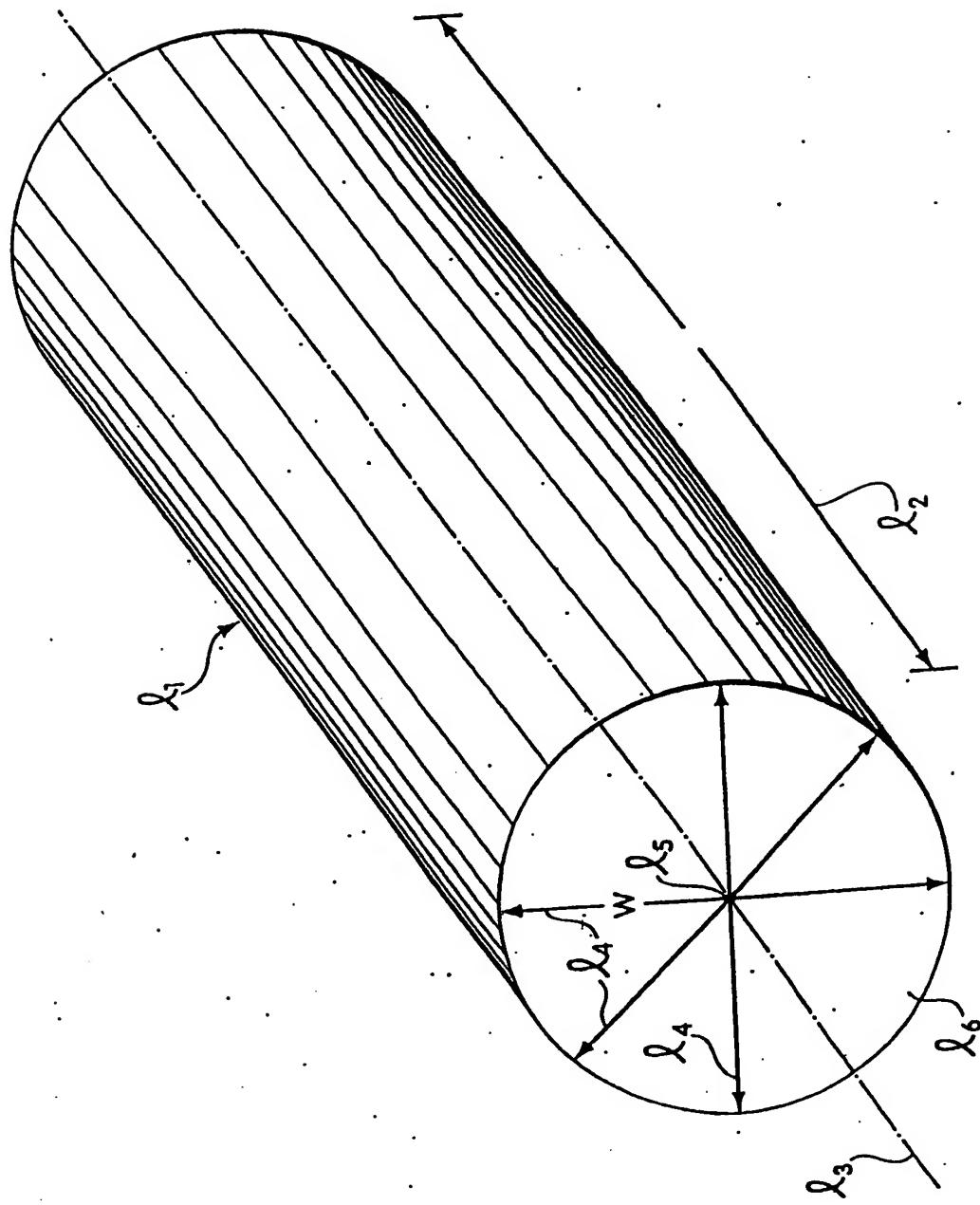


Fig. 1

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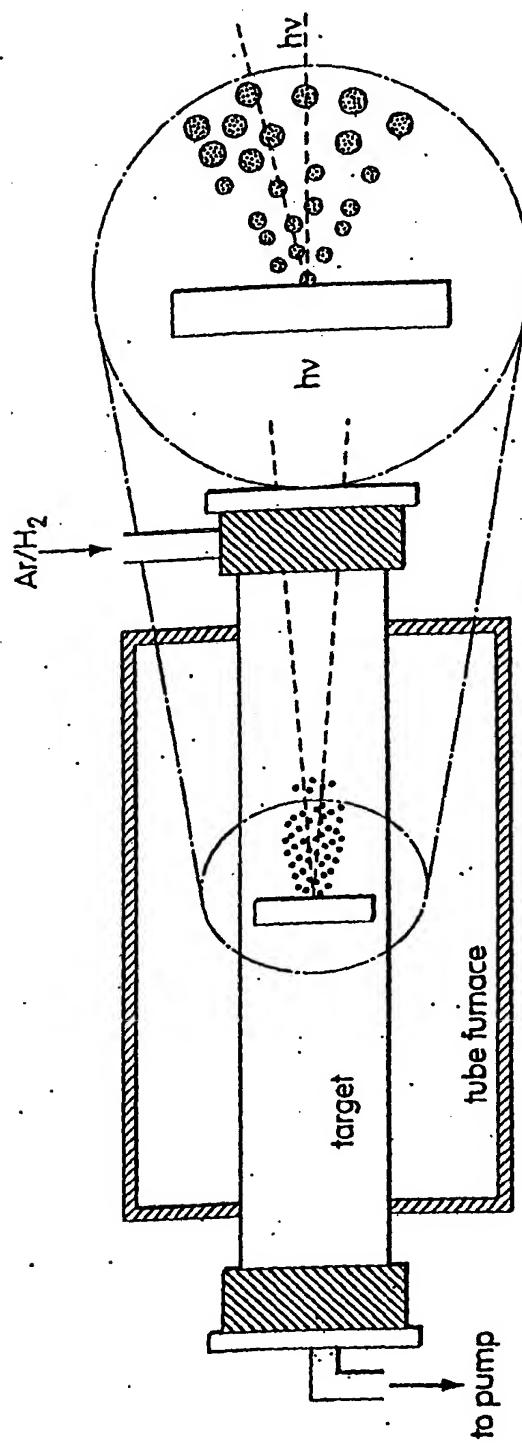


Fig. 2.

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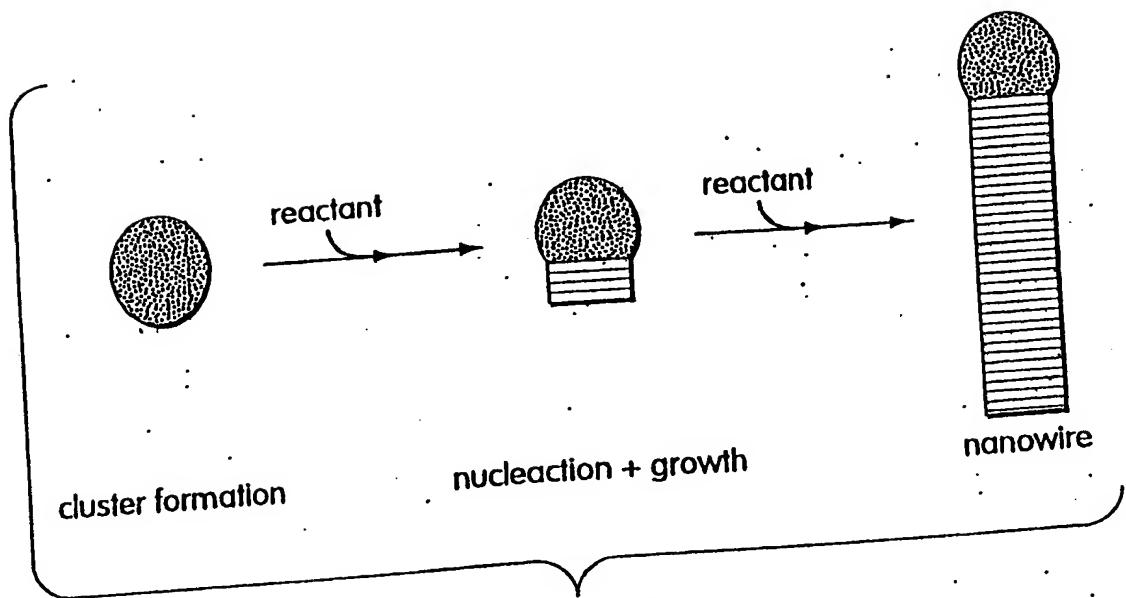


Fig. 3

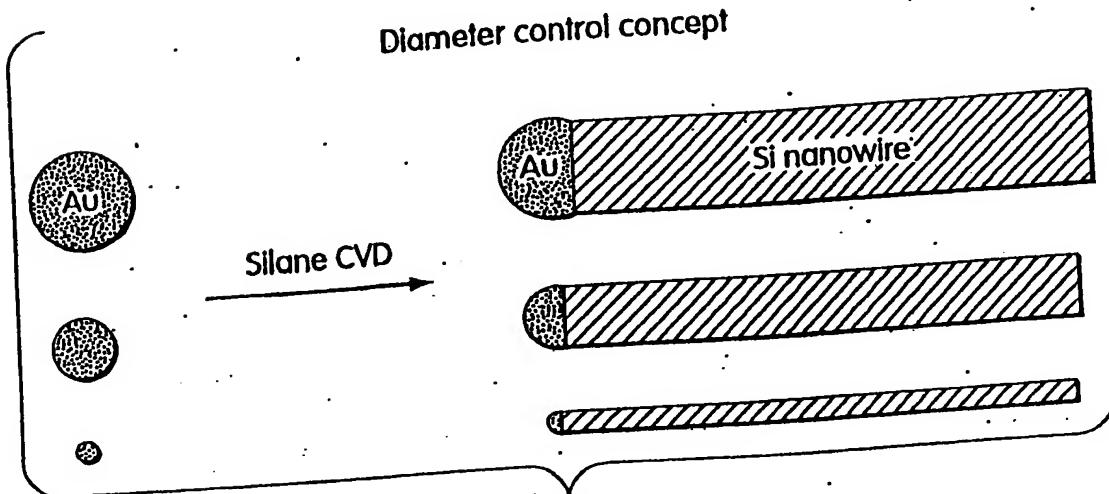


Fig. 4

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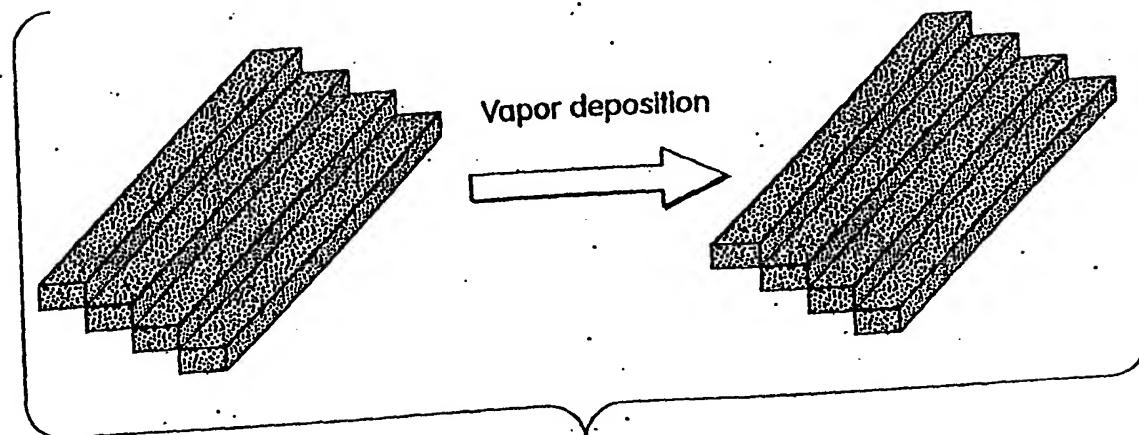


Fig. 5

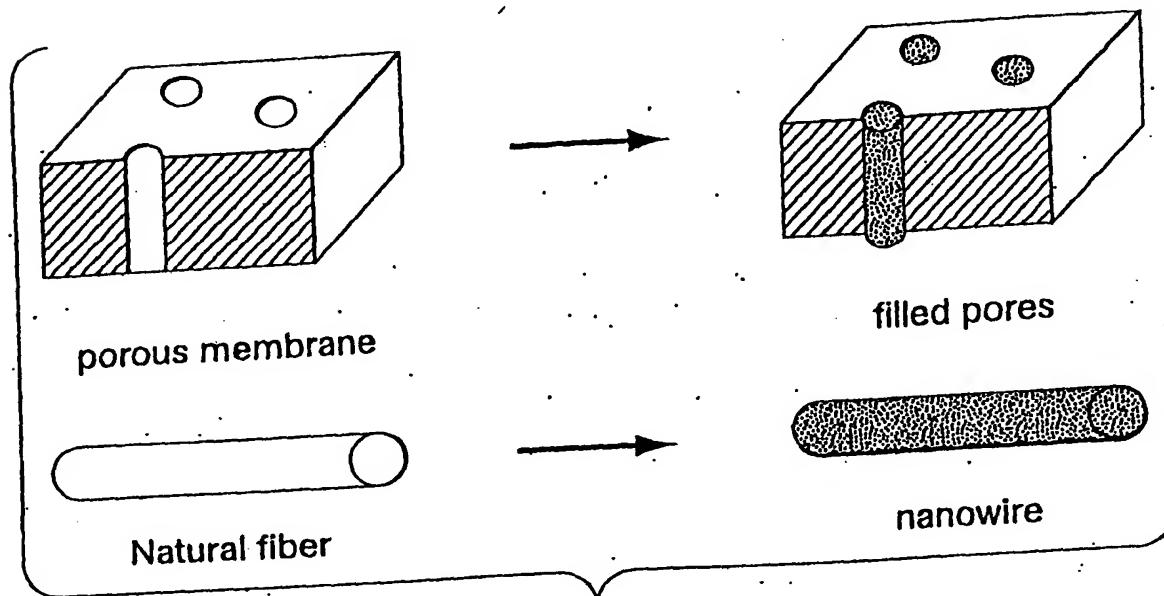


Fig. 6

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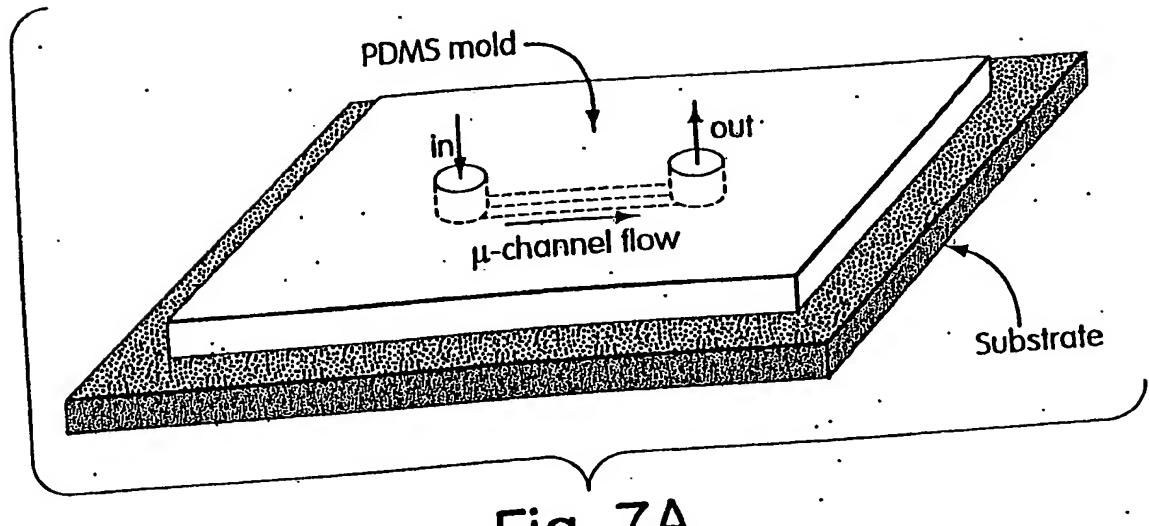


Fig. 7A

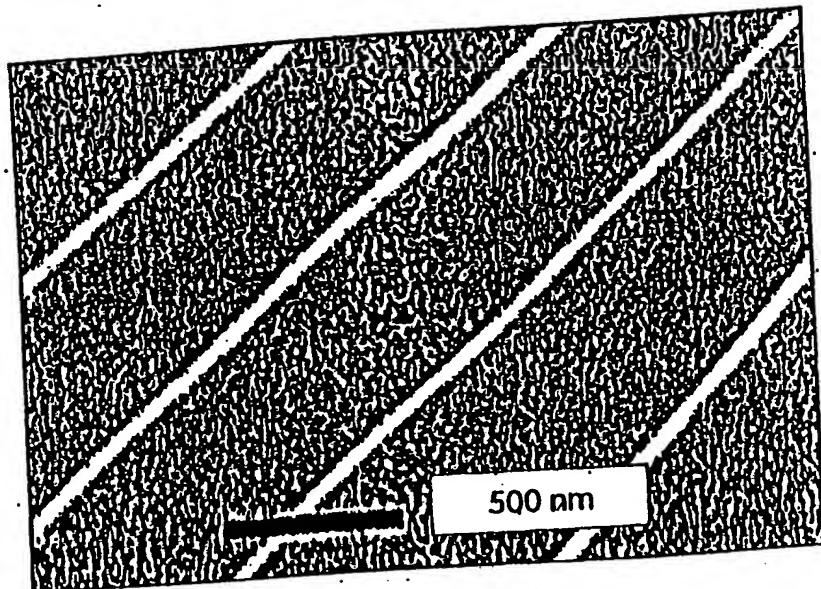


Fig. 7B

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I. DIRECT GROWTH

(a) DEFINE NANoclUSTER CATALYST



(b) INITIAL LCG SEMICONDUCTOR GROWTH



(c) SECOND LCG SEMICONDUCTOR GROWTH

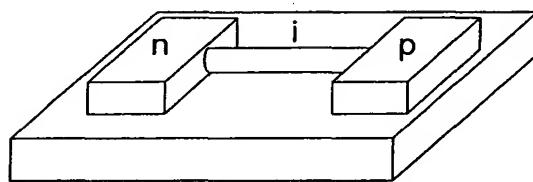


(d) REPEAT (b) OR (c) AS DESIRED



II. POST-SYNTHESIS FUNCTIONALIZATION

(a) FABRICATE NANOWIRE DEVICE



(b) INTRODUCE DOPANTS BY ANNEALING

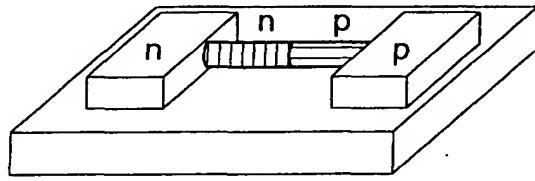


Fig. 8

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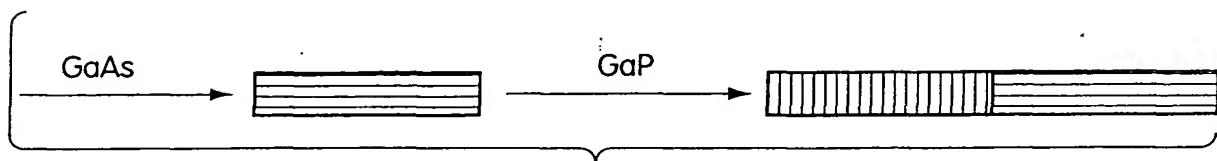


Fig. 9A

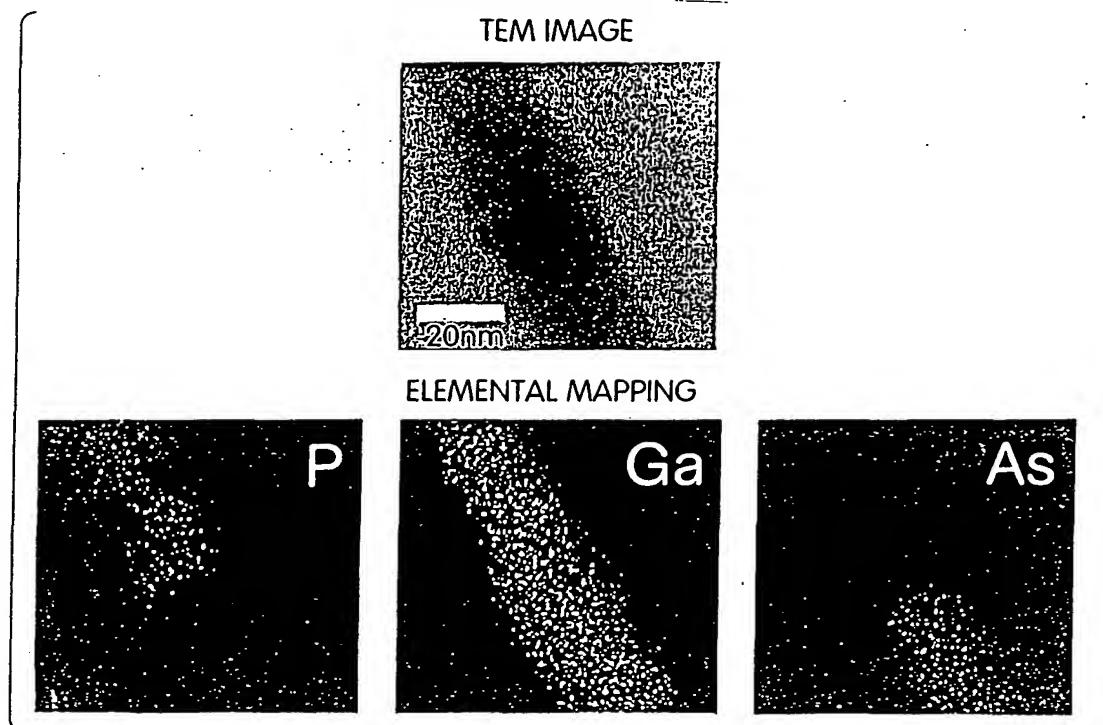


Fig. 9B

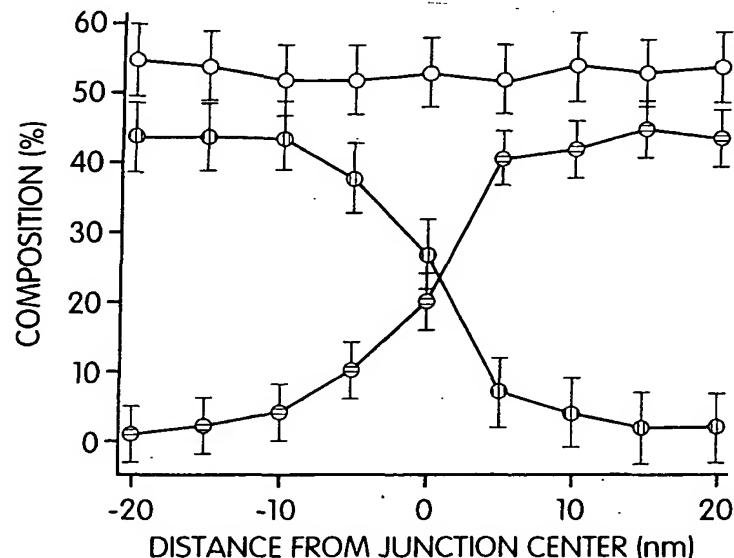


Fig. 9C

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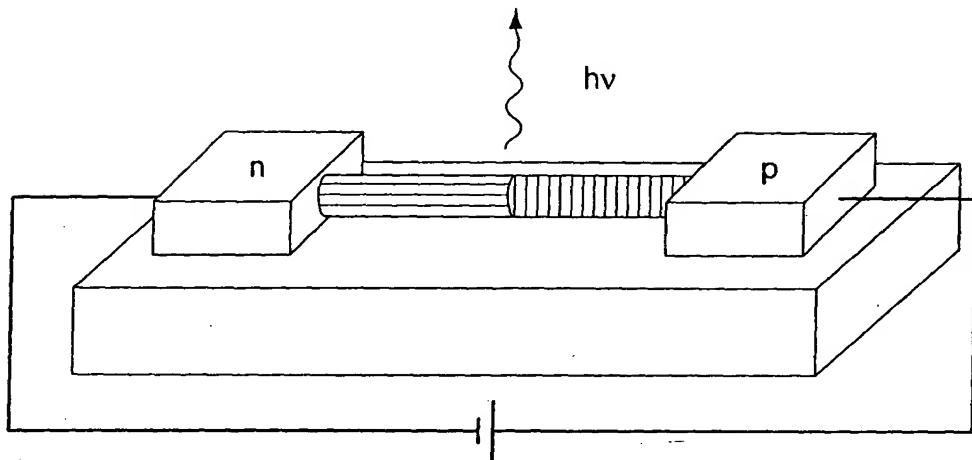


Fig. 10A

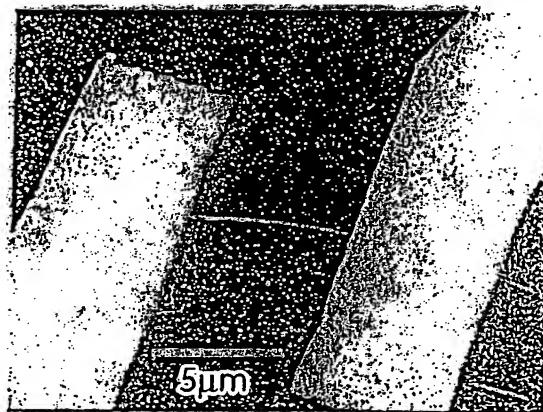


Fig. 10B

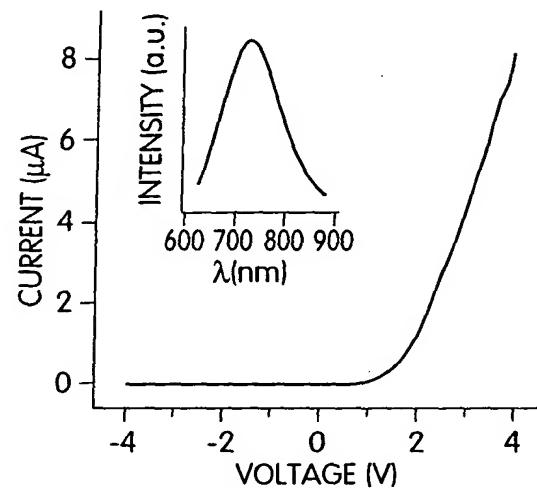


Fig. 10C

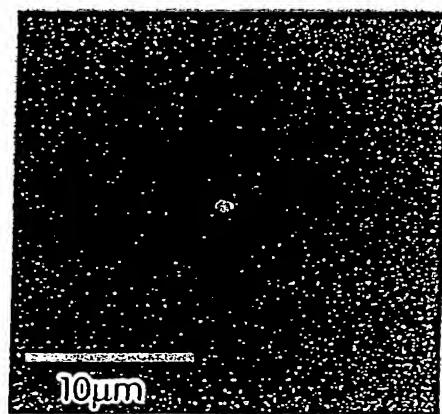
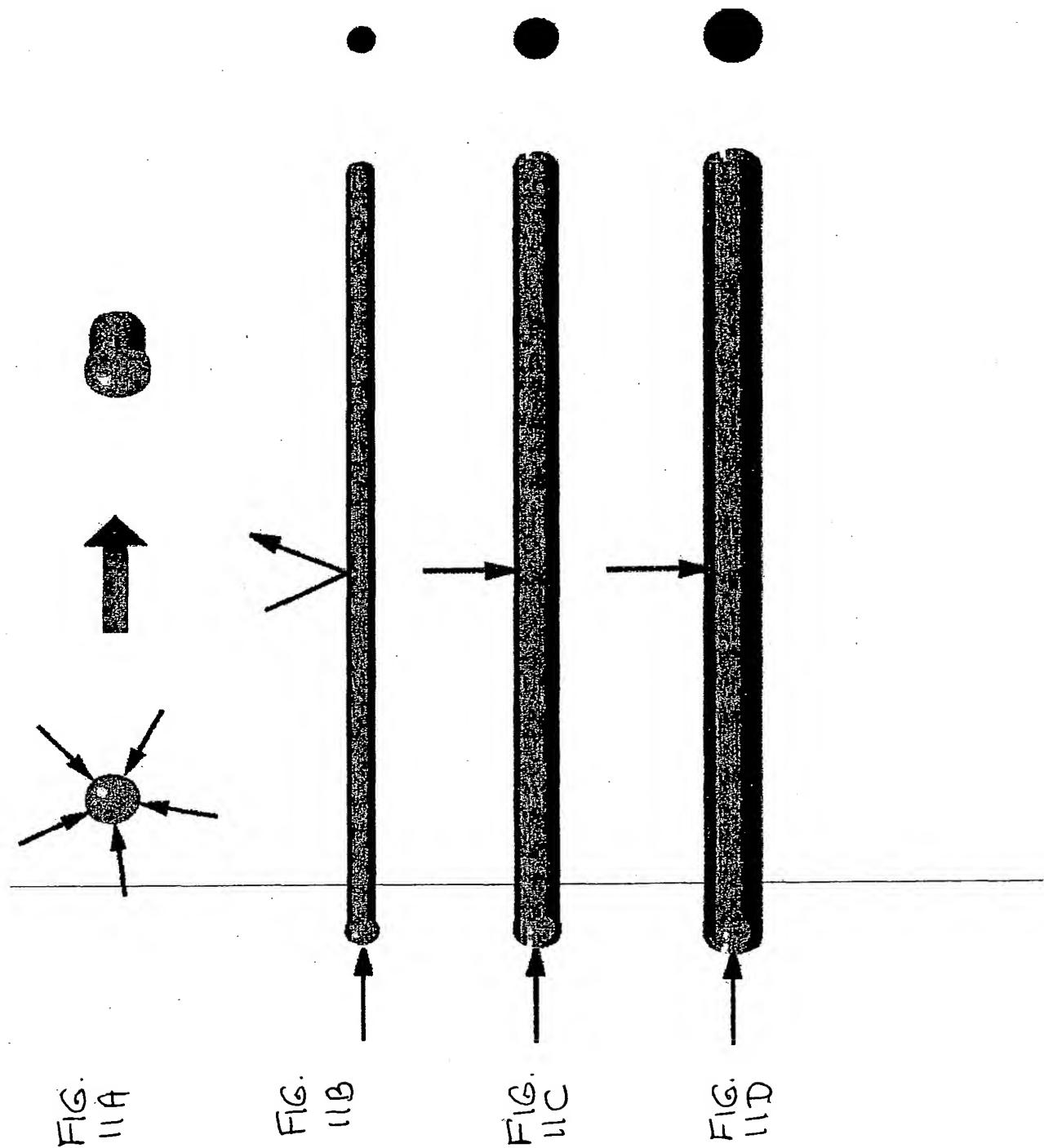


Fig. 10D

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FIG.
12A



FIG.
12B

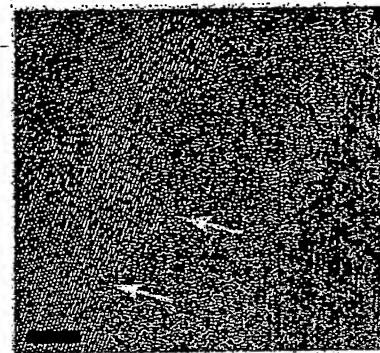


FIG.
12C



FIG.
12D

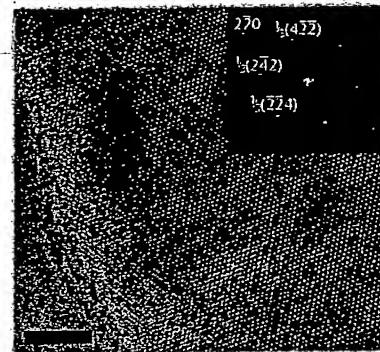


FIG.
12E



FIG.
12F

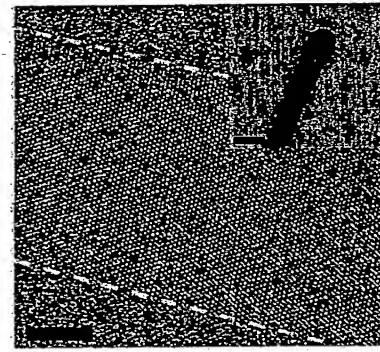
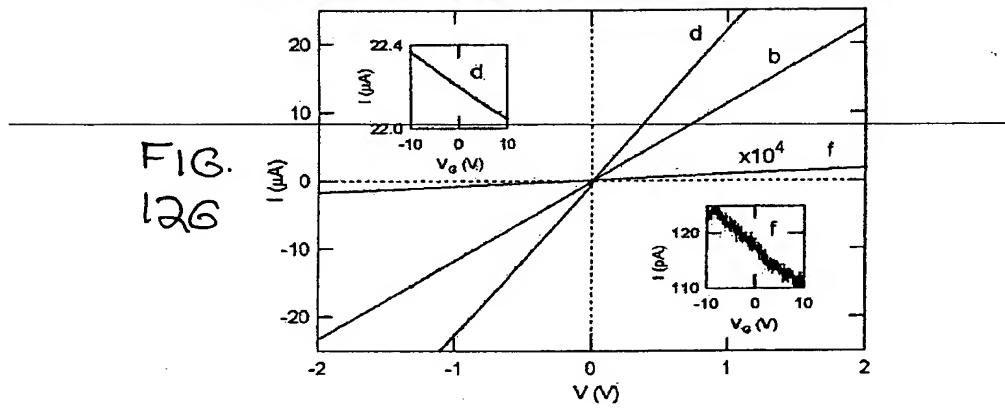


FIG.
12G



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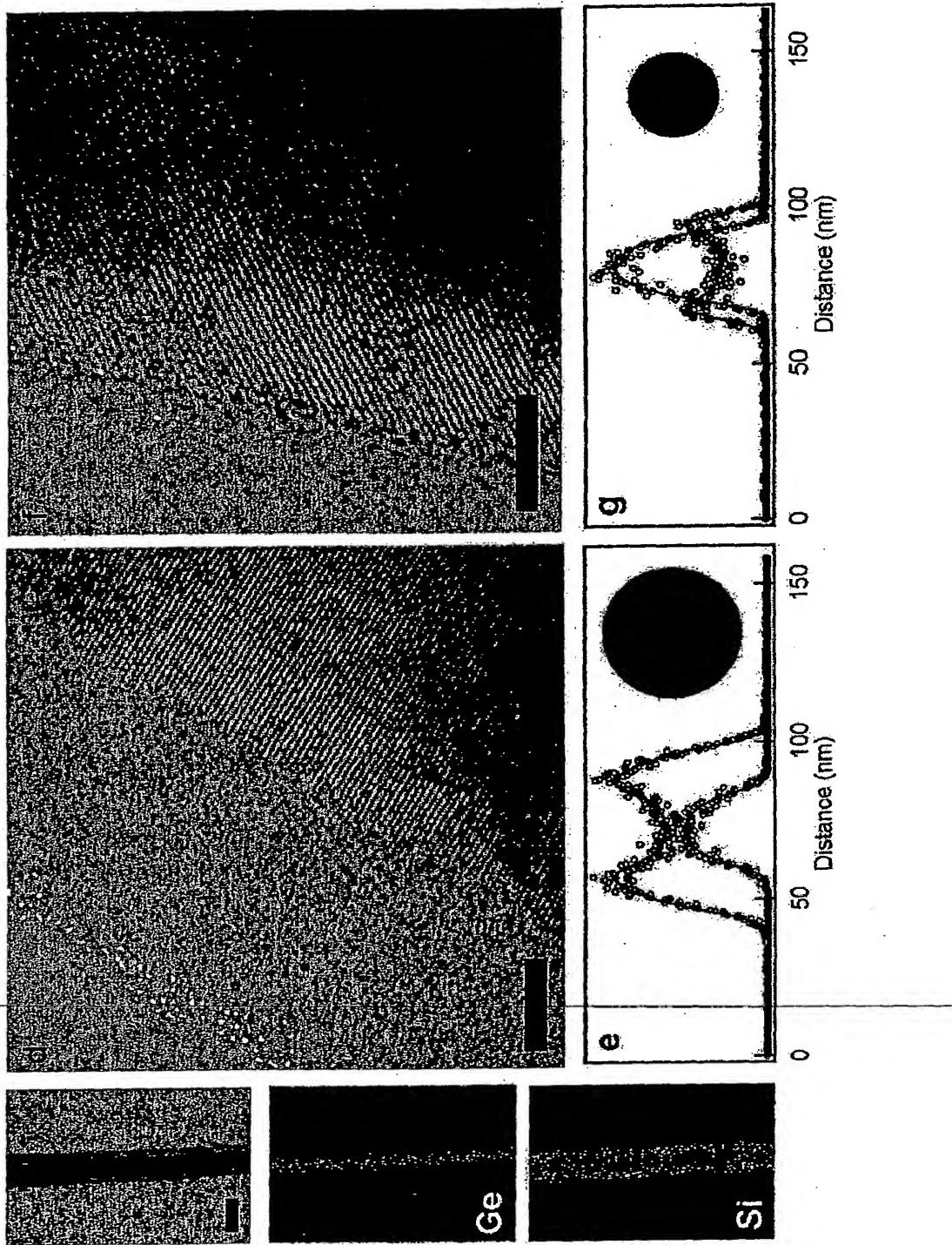


FIG.
13A

FIG.
13B

FIG.
13C

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FIG.
14A

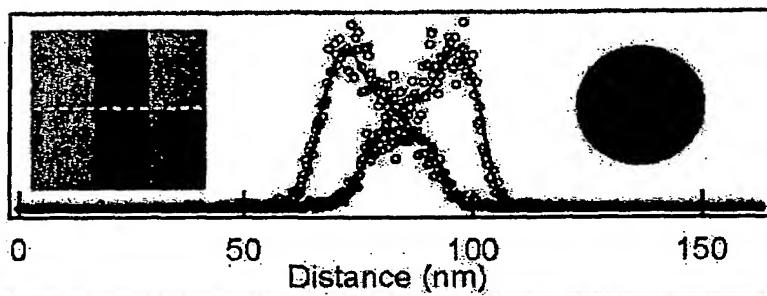


FIG.
14B

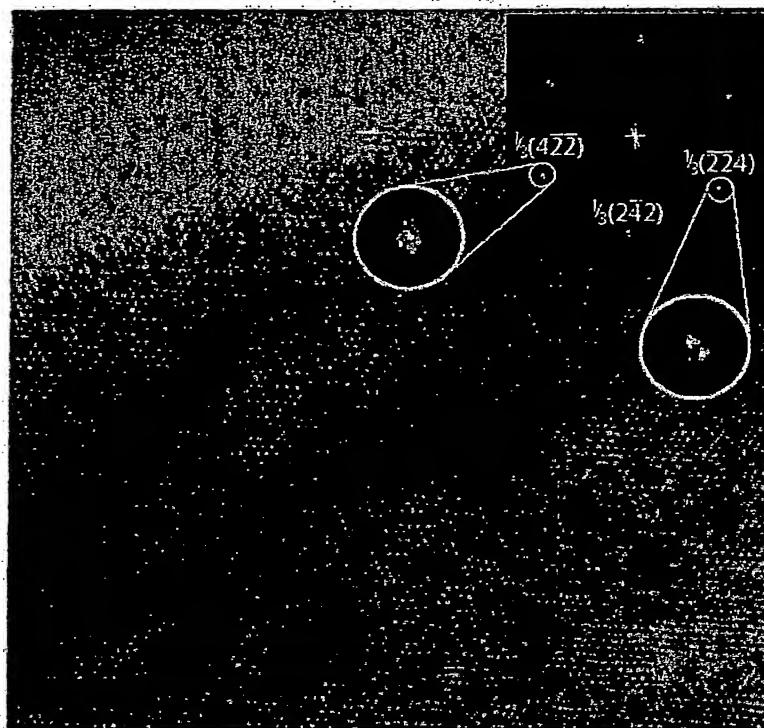
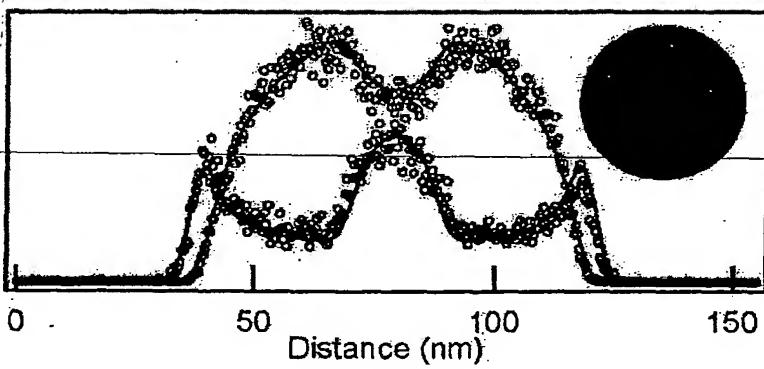


FIG.
14C



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FIG.
15A

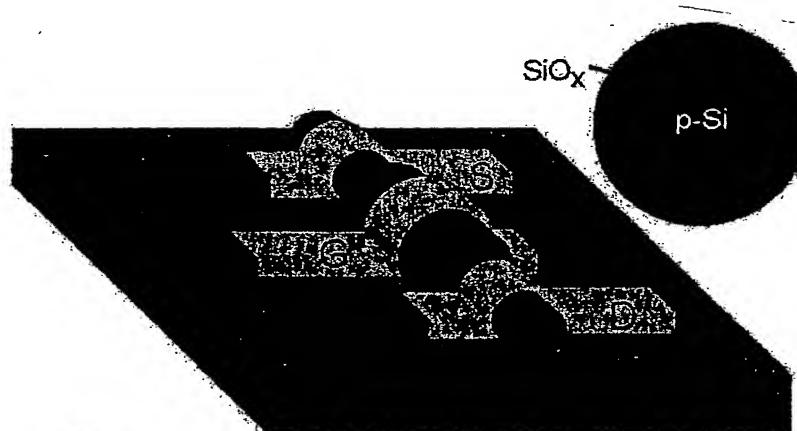


FIG.
15B

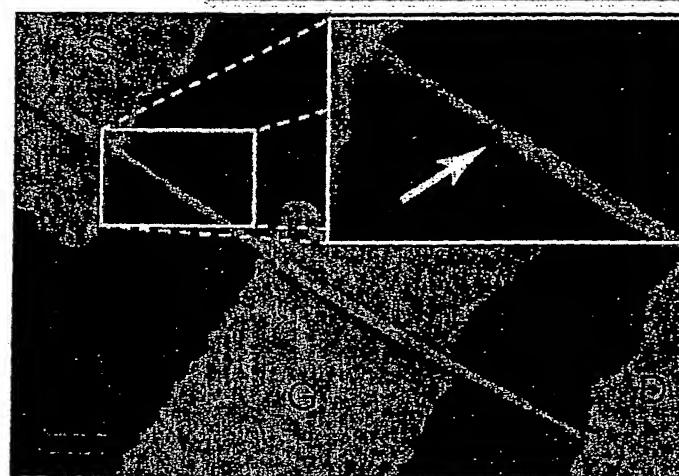
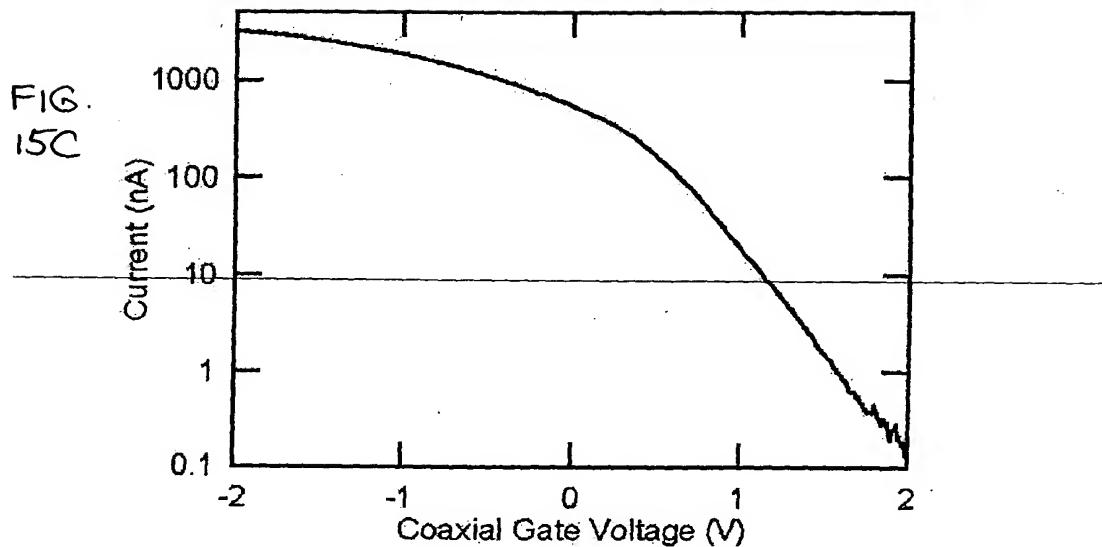


FIG.
15C



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FIG.
16A

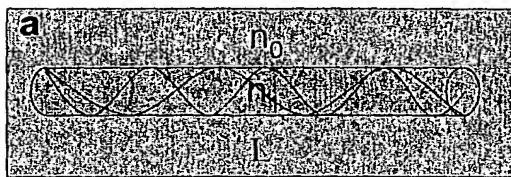


FIG.
16B

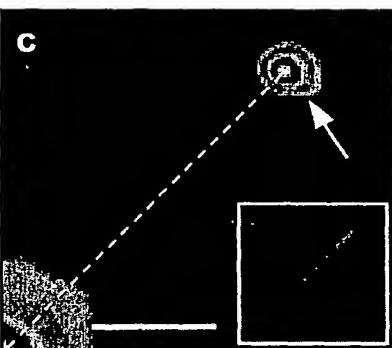
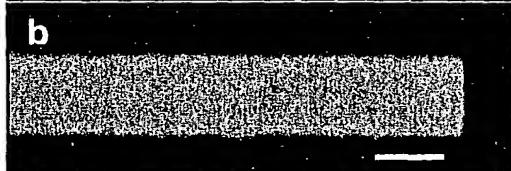


FIG.
16C

FIG.
16D

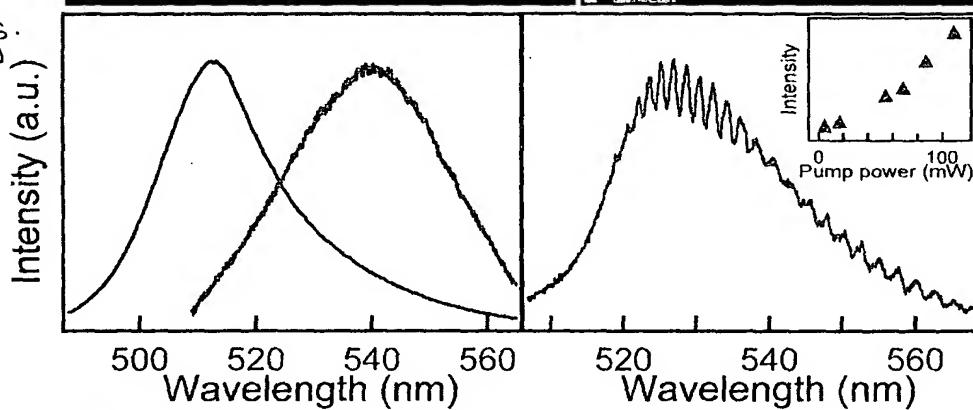
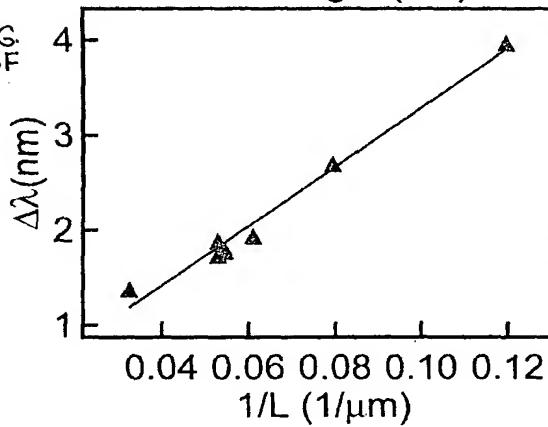


FIG.
16E

FIG.
16F



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FIG.
17A

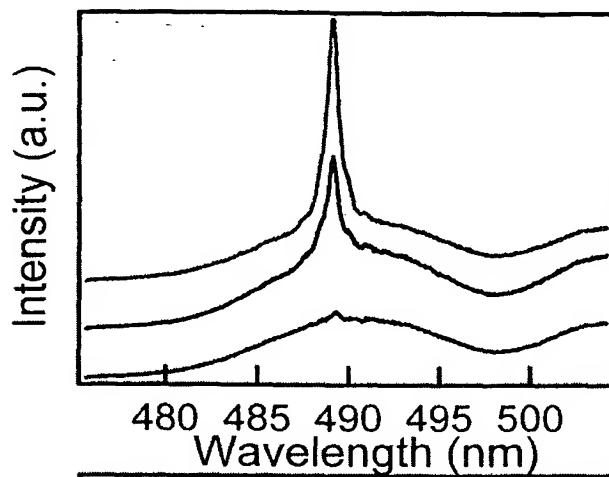


FIG.
17B

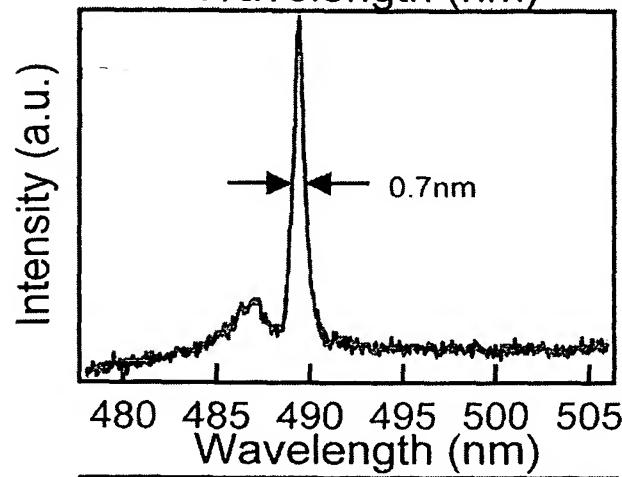
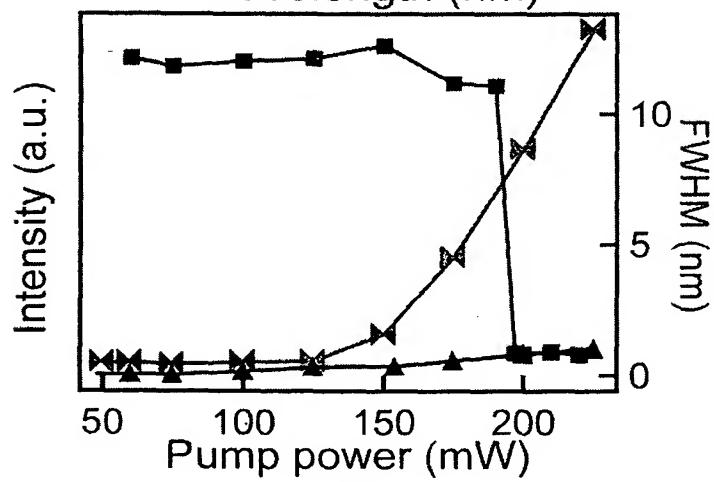
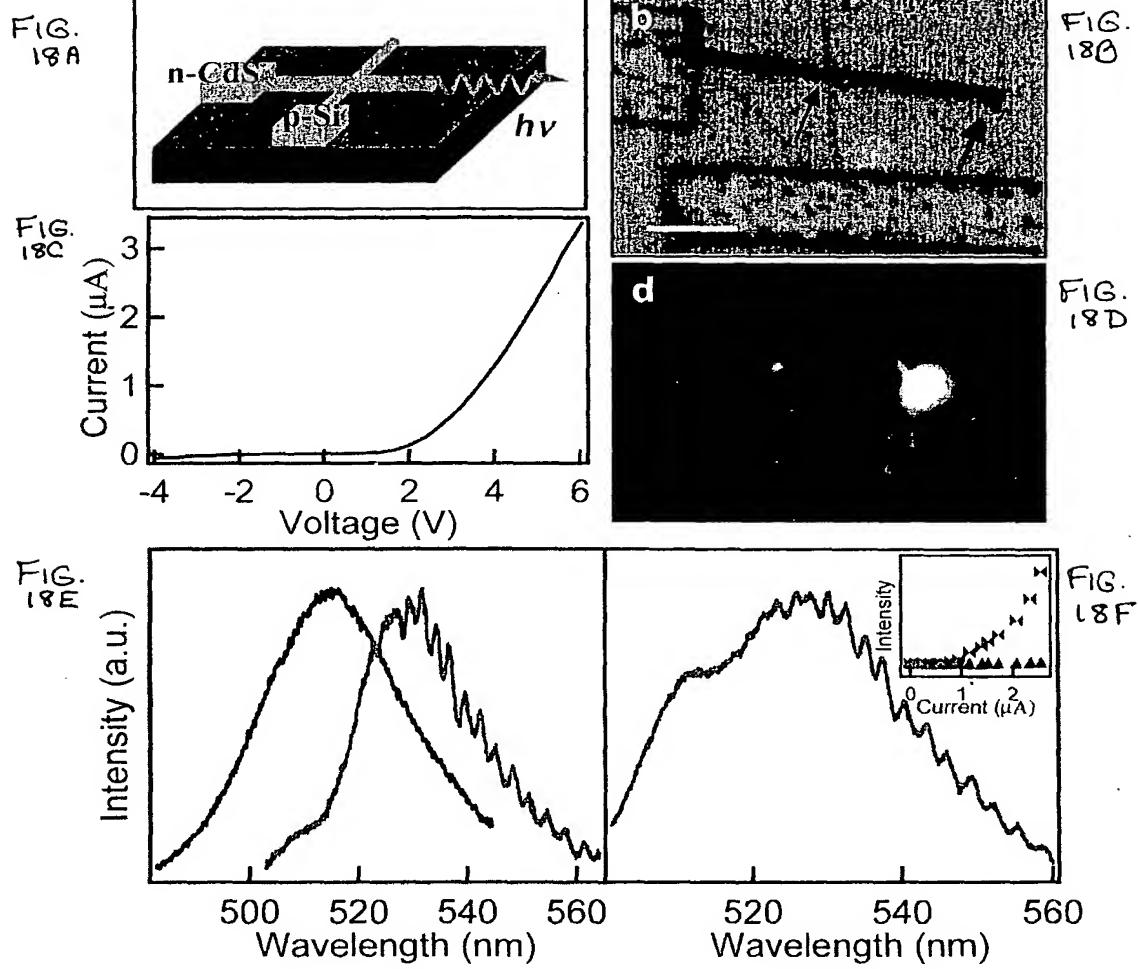


FIG.
17C



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FIG.
19A

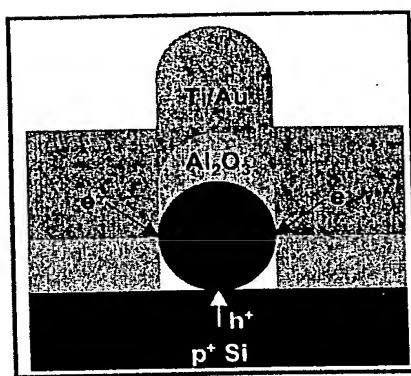


FIG.
19B

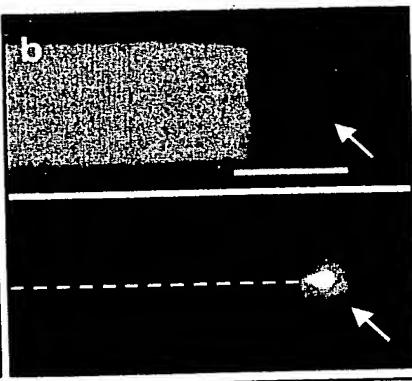


FIG.
19C

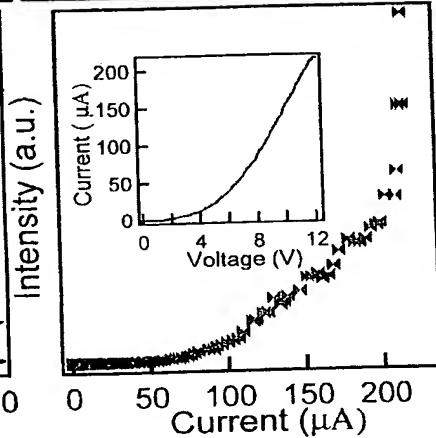
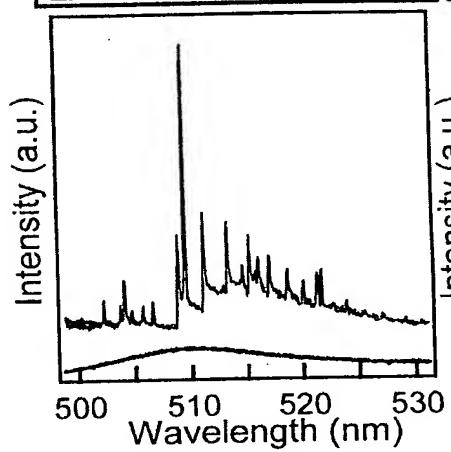


FIG.
19D

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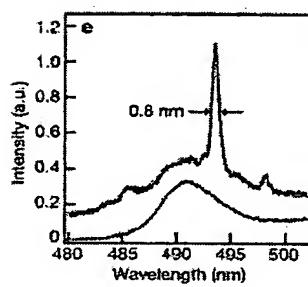


FIG. 19E

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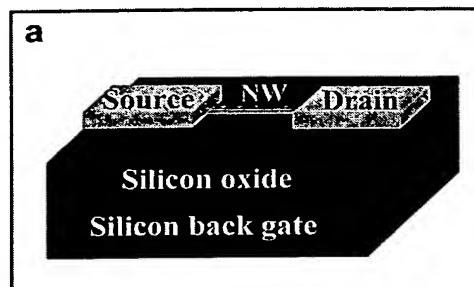


FIG.
20B

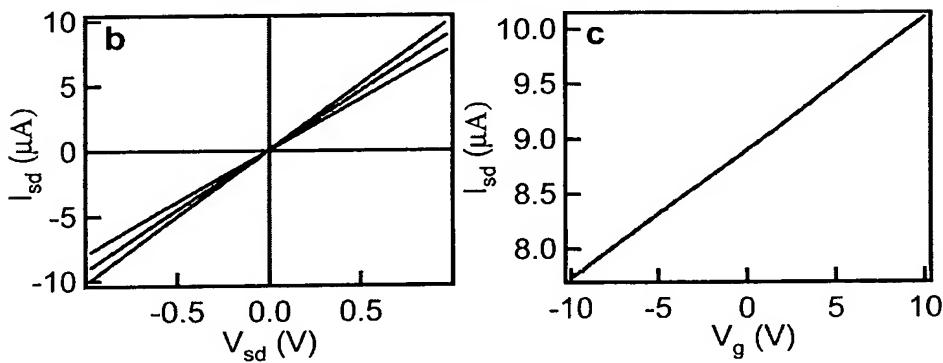
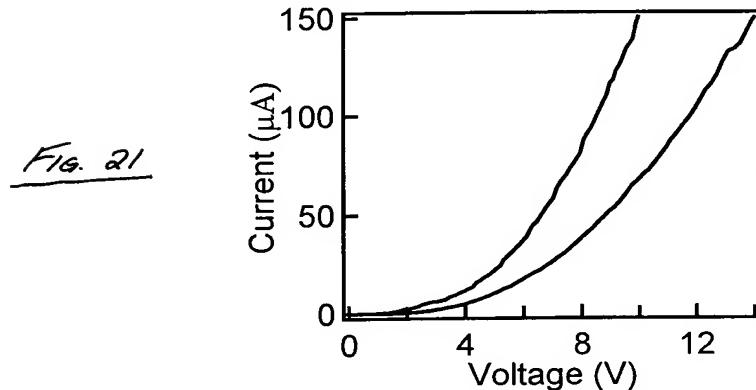


FIG.
20C



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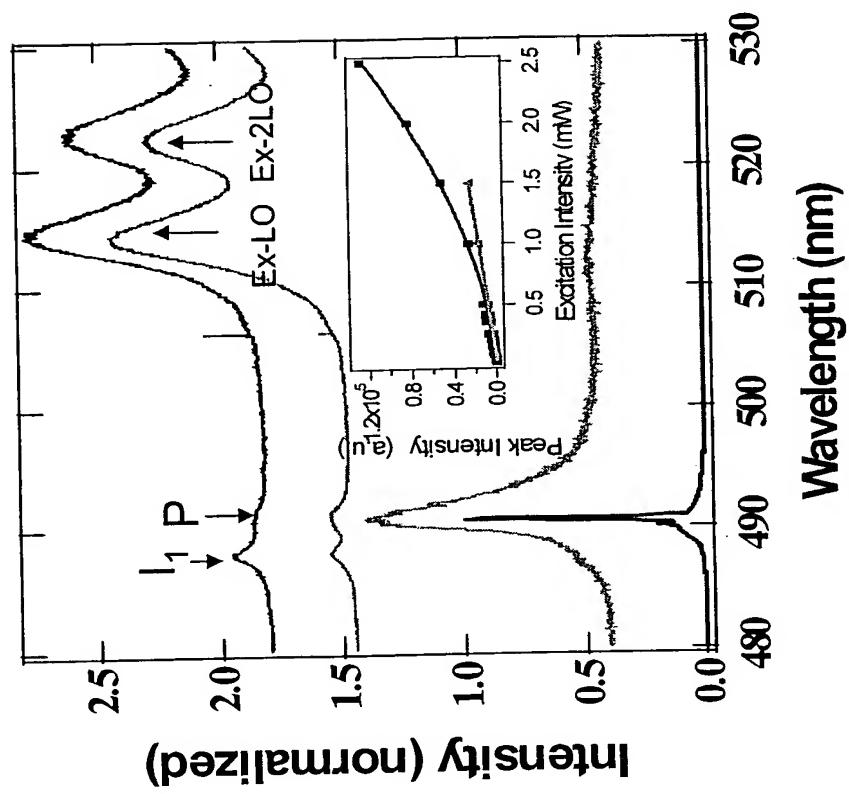
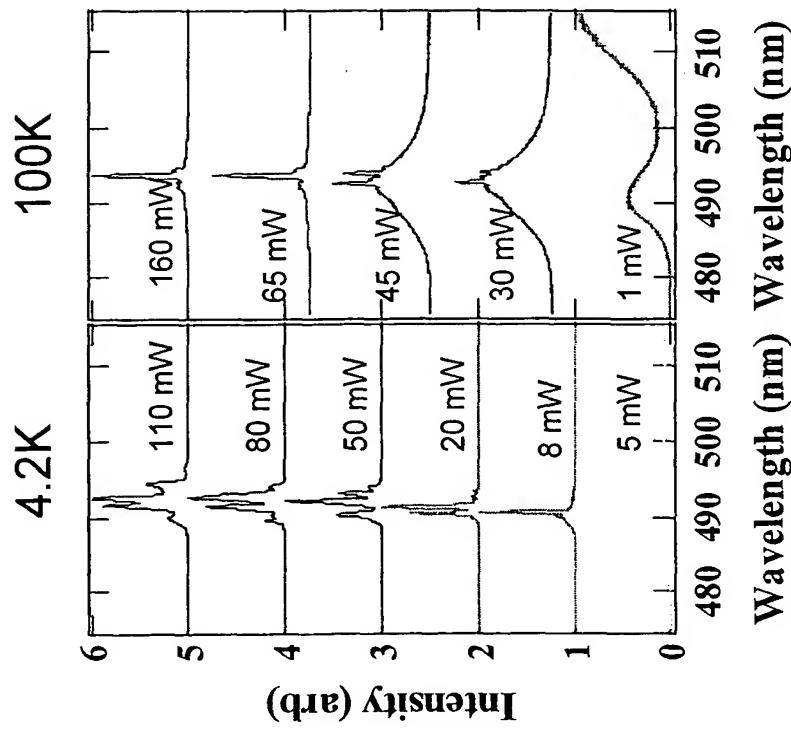


Fig. 22A

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$f_{\text{ig}} \cdot 22dB$

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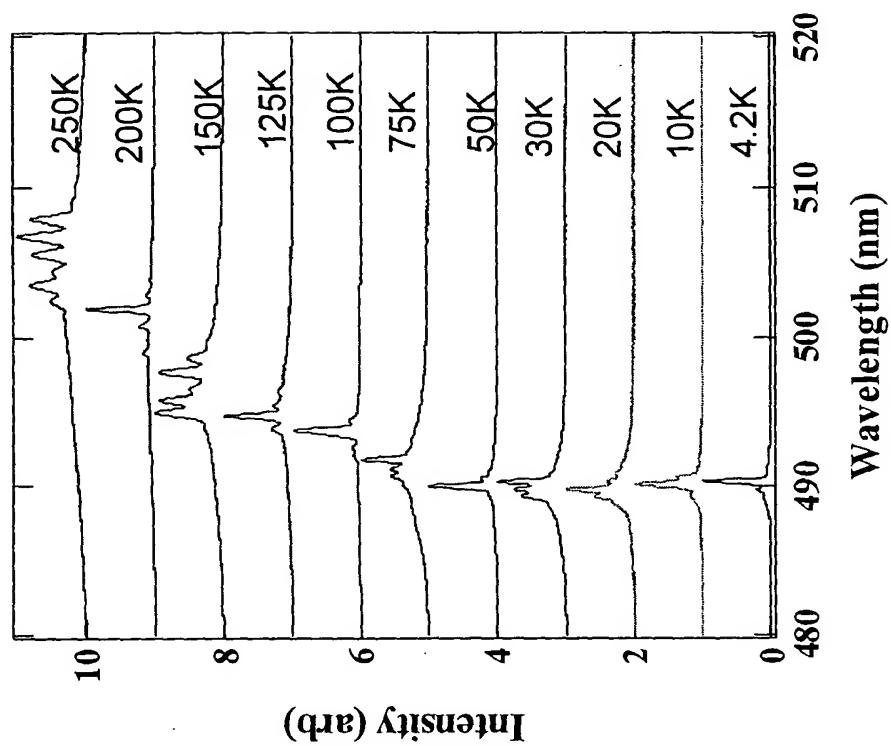


Fig. 2c

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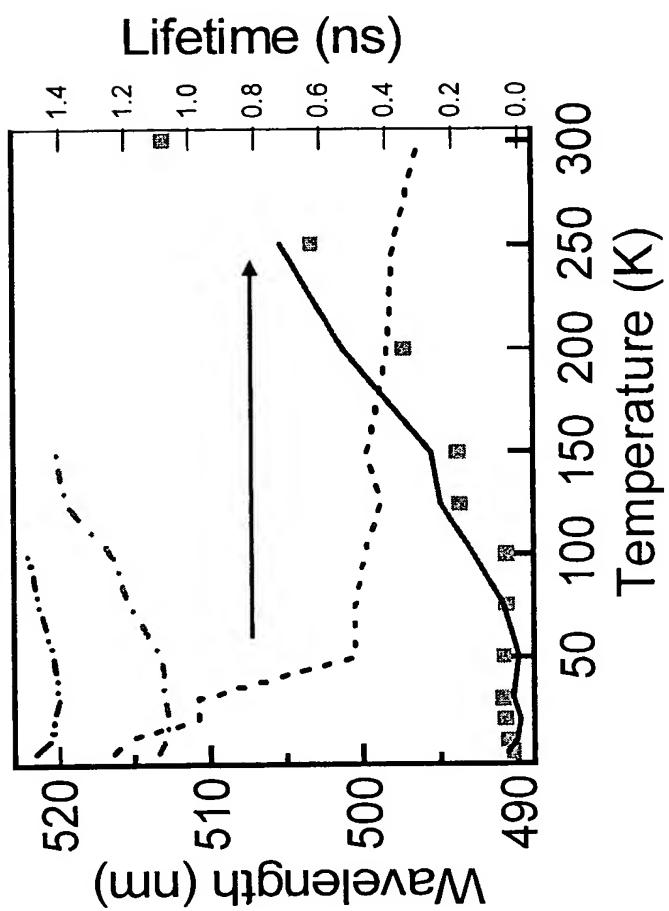


Fig. 22D

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Fig. 23A

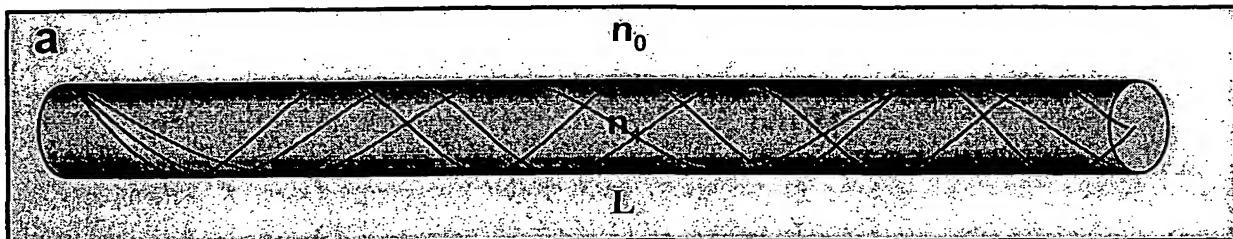


Fig. 23B



Fig. 23C

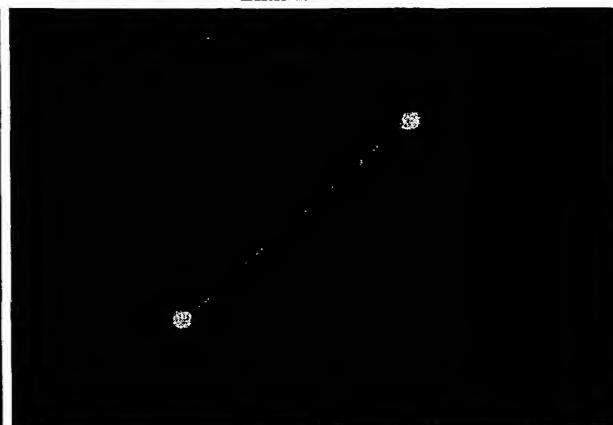


Fig. 23D

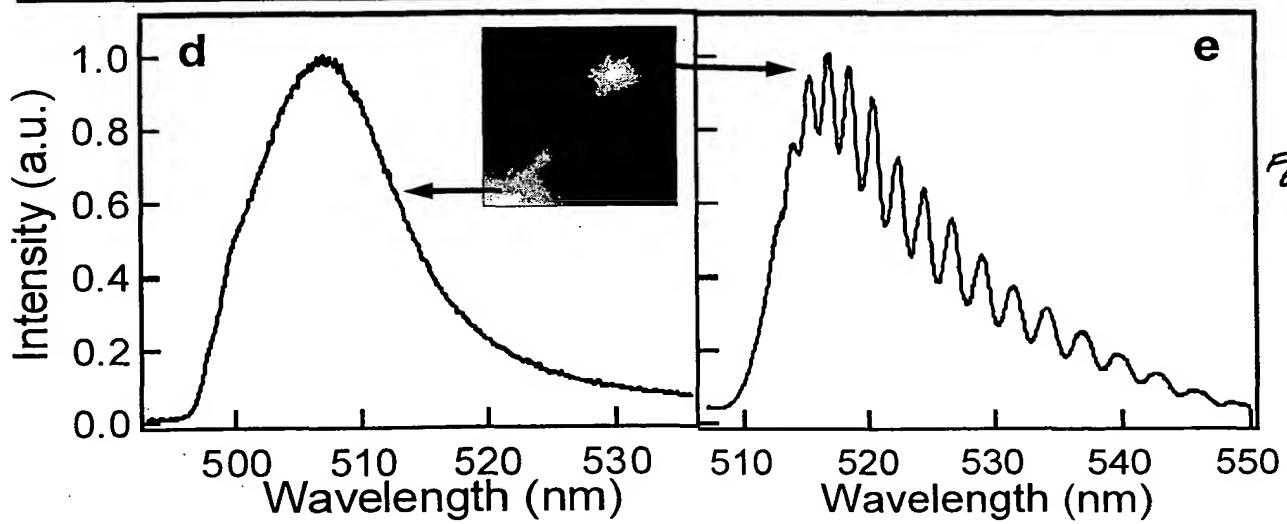
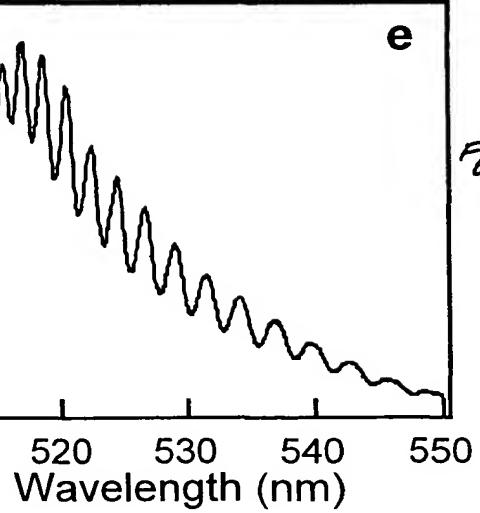


Fig. 23E



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